

## 2 W Packaged Single-Bias PHEMT GaAs Power FETs

### FEATURES

- 2W Typical Output Power
- 13dB Typical Linear Power Gain at 2.45GHz
- High Linearity: IP3 = 43 dBm Typical
- High Power Added Efficiency: Nominal PAE of 35%
- Breakdown Voltage:  $BV_{DGO} \geq 15V$
- $W_g = 5 \text{ mm}$
- 100 % DC Tested
- Suitable for High Reliability Application
- Lost Cost Ceramic Package

### PHOTO ENLARGEMENT



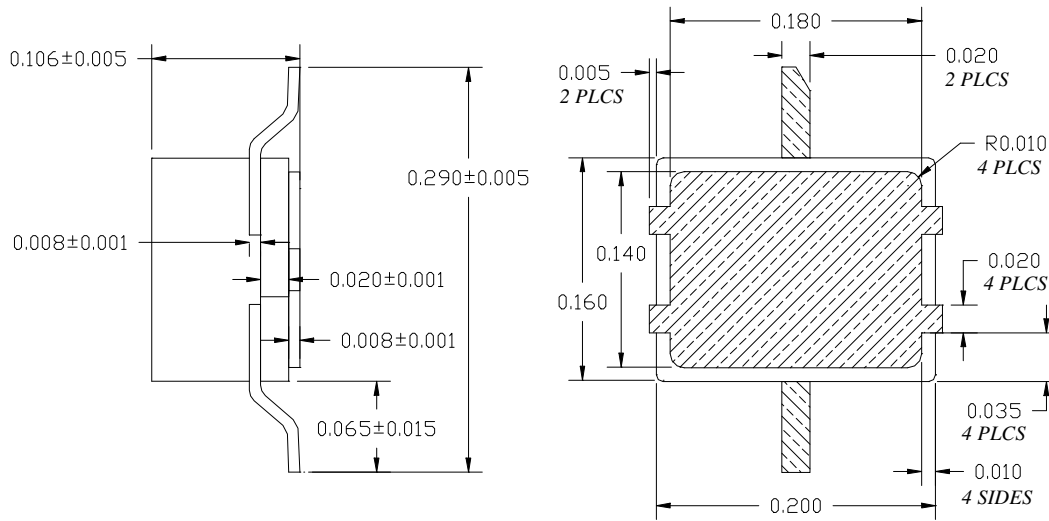
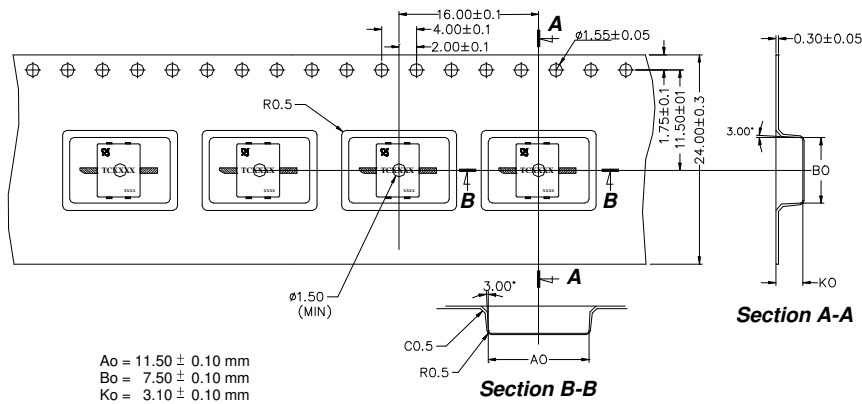
### DESCRIPTION

The TC3967 is a self-bias Cu-based ceramic packaged device with TC1601N PHEMT GaAs FETs, which is designed to provide the single power supply. The Cu-based ceramic package provides excellent thermal conductivity for the GaAs FET. The device is suitable for oscillator and power amplifiers in a wide range of commercial application. All devices are 100% DC tested to assure consistent quality.

### ELECTRICAL SPECIFICATIONS (@ 2.45 GHz)

Symbol	CONDITIONS	MIN	TYP	MAX	UNIT
$P_{1dB}$	Output Power at 1dB Gain Compression Point $V_{DS} = 8 \text{ V}$	32	33		dBm
$G_L$	Linear Power Gain $V_{DS} = 8 \text{ V}$		13		dB
IP3	Intercept Point of the 3 <sup>rd</sup> -order Intermodulation $V_{DS} = 8 \text{ V}$ , $*P_{SCL} = 20 \text{ dBm}$		43		dBm
PAE	Power Added Efficiency at 1dB Compression Power		35		%
$I_{DS}$	Drain-Source Current at $V_{DS} = 8 \text{ V}$		600		mA
$BV_{DGO}$	Drain-Gate Breakdown Voltage at $I_{DGO} = 1.2\text{mA}$	15	18		Volts
$R_{th}$	Thermal Resistance		8		$^{\circ}\text{C}/\text{W}$

**Note:**  $*P_{SCL}$ : Output Power of Single Carrier Level.

**OUTLINE DIMENSIONS (in inch)**

**Tape & Reel Package Orientation (mm)**


Standard Reel Size	7"
Standard Reel Quantity	400